

IN THE CLAIMS:

These claims will replace all prior versions of claims in the present application.

1. (Original) A method for measuring light transmittance of a lens undergoing examination comprising the steps of:
 - (a) supplying light of a predetermined wavelength narrowed along an optical axis;
 - (b) focusing the light to converge on or near a lens undergoing examination that is disposed on the optical axis so that a portion of the light is transmitted through the lens undergoing examination and subsequently measuring the intensity of the transmitted portion to generate a lens transmission value;
 - (c) focusing the light to converge along the optical axis when the lens undergoing examination is not disposed on the optical axis and subsequently measuring the intensity of the light to generate a baseline value; and
 - (d) determining the light transmittance of the lens undergoing examination from the lens transmission value and the baseline value.
2. (Original) A method for measuring light transmittance according to Claim 1, wherein the light of a predetermined wavelength is supplied by a light source disposed along the optical axis, and wherein in step (b) when the light is focused to converge on or near the lens undergoing examination the light converges on or near a surface portion of the lens undergoing examination, wherein the surface portion is that portion of the lens undergoing examination that is closest to the light source.
3. (Original) A method for measuring light transmittance according to claim 1, wherein the light transmittance of the lens undergoing examination is determined from a ratio between the lens transmission value and the baseline value.

4. (Original) A method for measuring light transmittance according to claim 1, wherein step (b) further comprises filtering the transmitted portion with an interference filter before measuring the intensity of the transmitted portion, and step (c) further comprises filtering the light with the interference filter before measuring the intensity of the light.

5. (Original) A method for measuring light transmittance according to claim 4, wherein step (b) further comprises converging the filtered transmitted portion with a second convergence lens onto a light detector so that the light detector can measure the intensity of the filtered transmitted portion, and step (c) further comprises converging the light with the second convergence lens onto the light detector so that the light detector can measure the intensity of the light.

6. (Original) A method for measuring light transmittance according to claim 1, wherein the light is focused in step (b) and in step (c) by a first convergence lens.

7. (Presently Amended) An apparatus for measuring light transmittance of a lens undergoing examination, the apparatus comprising a first sub-apparatus and a microprocessor,

wherein the first sub-apparatus comprises:

a first light source emitting light of a predetermined first wavelength, wherein the first light source is disposed on a first optical axis;

a first light detector for detecting the light of the predetermined first wavelength, wherein the first light detector is disposed on the first optical axis and generates output signals in response to detecting light of the predetermined first wavelength;

a first lens holding apparatus disposed to hold a lens undergoing examination, wherein the first lens holding apparatus is disposed between the first light source and the first light detector and is positioned on the first optical axis, wherein the first lens ~~holder~~holding apparatus releasably holds the lens undergoing examination; and

a first convergence lens for converging rays of the light of the predetermined first wavelength at a first prescribed position, wherein the first prescribed position is on or near the lens undergoing examination when the first lens ~~holder~~holding apparatus is holding the lens undergoing examination; and

the microprocessor is electronically connected to receive

a lens transmission value from the first light detector when the lens is disposed in the first lens holding apparatus, and

a baseline transmission from the first light detector value when no lens is disposed in the first lens holding apparatus, and

the microprocessor is further disposed to calculate a ratio of the lens transmission value and the baseline transmission value and to send the ratio to one or more elements selected from the group consisting of a display element and a memory unit.

8. (Original) An apparatus for measuring light transmittance according to Claim 7, wherein the first prescribed position is on or near a surface portion of the lens undergoing examination, wherein the surface portion is that portion of the lens undergoing examination that is closest to the first light source.

9. (Original) An apparatus for measuring light transmittance according to Claim 7, wherein the first sub-apparatus further comprises:

a second convergence lens disposed between the first lens holding apparatus and the first light detector, wherein the second convergence lens serves to converge rays of the light of the first predetermined wavelength into the first light detector.

10. (Original) An apparatus for measuring light transmittance according to Claim 8, wherein the first sub-apparatus further comprises:

a second convergence lens disposed between the first lens holding apparatus and the first light detector, wherein the second convergence lens serves to converge rays of the light of the first predetermined wavelength into the first light detector.

11. (Original) An apparatus for measuring light transmittance according to Claim 7, wherein the first sub-apparatus further comprises:

a first interference filter disposed along the first optical axis and on a path of the rays of the light of the predetermined first wavelength, wherein the first interference filter transmits mostly light having a wavelength within a range about the first wavelength.

12. (Original) An apparatus for measuring light transmittance according to Claim 8, wherein the first sub-apparatus further comprises:

a first interference filter disposed along the first optical axis and on a path of the rays of the light of the predetermined first wavelength, wherein the first interference filter transmits mostly light having a wavelength within a range about the first wavelength.

13. (Original) An apparatus for measuring light transmittance according to Claim 9, wherein the first sub-apparatus further comprises:

a first interference filter disposed along the first optical axis and on a path of the rays of the light of the predetermined first wavelength, wherein the first interference filter transmits mostly light having a wavelength within a range about the first wavelength.

14. (Presently Amended) An apparatus for measuring light transmittance ~~according to claim 11~~, the apparatus ~~further comprising~~ a first sub-apparatus, a second sub-apparatus, and a microprocessor electronically connected to receive signals from the first sub-apparatus and the second sub-apparatus,
wherein the first sub-apparatus comprises:

a first light source emitting light of a predetermined first wavelength, wherein the first light source is disposed on a first optical axis;

a first light detector for detecting the light of the predetermined first wavelength, wherein the first light detector is disposed on the first optical axis and generates output signals in response to detecting light of the predetermined first wavelength;

a first lens holding apparatus disposed to hold a lens undergoing examination, wherein the first lens holding apparatus is disposed between the first light source and the first light detector and is positioned on the first optical axis, wherein the first lens holding apparatus releasably holds the lens undergoing examination;

a first convergence lens for converging rays of the light of the predetermined first wavelength at a first prescribed position, wherein the first prescribed position is on or near the lens undergoing examination when the first lens holding apparatus is holding the lens undergoing examination; and

a first interference filter disposed along the first optical axis and on a path of the rays of the light of the predetermined first wavelength, wherein the first interference filter transmits mostly light having a wavelength within a range about the first wavelength; and

wherein the second sub-apparatus comprises:

a second light source emitting light of a predetermined second wavelength, wherein the second light source is disposed on a second optical axis and the predetermined second wavelength is different from the predetermined first wavelength;

a second light detector for detecting the light of the predetermined second wavelength, wherein the second light detector is disposed on the second optical axis and generates output signals in response to detecting light of the predetermined second wavelength, and wherein the first lens holding apparatus is disposed between the second light source and the second light detector and is positioned on the second optical axis;

a second lens holding apparatus for holding the lens undergoing examination when the first lens holding apparatus is not holding the lens undergoing examination, wherein the second lens holding apparatus is disposed between the second light source and the second light detector and is positioned on the second optical axis, wherein the second lens holder releasably holds the lens undergoing examination;

an additional first convergence lens for converging rays of the light of the predetermined second wavelength at a second prescribed position, wherein the second prescribed position is on or near the lens undergoing examination when the ~~first lens holder~~second lens holding apparatus is holding the lens undergoing examination;

an additional second convergence lens disposed between the ~~first~~second lens holding apparatus and the second light detector, wherein the additional second convergence lens serves to converge rays of the light of the second predetermined wavelength into the second light detector; and

a second interference filter disposed along the second optical axis and on a path of the rays of the light of the predetermined second wavelength, wherein the second interference

filter transmits mostly light having a wavelength within a range about the predetermined second wavelength, wherein the microprocessor receives signals from the first light detector of the first sub-apparatus and receives signals from the second light detector of the second sub-apparatus, and the microprocessor determines the light transmittance of the lens undergoing examination based upon the signals received from the first light detector and the second light detector.

15. (Presently Amended) An apparatus for measuring light transmittance ~~according to claim 12~~, the apparatus ~~further~~ comprising a first sub-apparatus, a second sub-apparatus, and a microprocessor electronically connected to receive signals from the first sub-apparatus and the second sub-apparatus,
wherein the first sub-apparatus comprises:

a first light source emitting light of a predetermined first wavelength, wherein the first light source is disposed on a first optical axis;

a first light detector for detecting the light of the predetermined first wavelength, wherein the first light detector is disposed on the first optical axis and generates output signals in response to detecting light of the predetermined first wavelength;

a first lens holding apparatus disposed to hold a lens undergoing examination, wherein the first lens holding apparatus is disposed between the first light source and the first light detector and is positioned on the first optical axis, wherein the first lens holding apparatus releasably holds the lens undergoing examination;

a first convergence lens for converging rays of the light of the predetermined first wavelength at a first prescribed position, wherein the first prescribed position is on or near the lens undergoing examination when the first lens holding apparatus is holding the lens undergoing examination and the first prescribed position is on or near a surface portion of the

lens undergoing examination, wherein the surface portion is that portion of the lens undergoing examination that is closest to the first light source; and

a first interference filter disposed along the first optical axis and on a path of the rays of the light of the predetermined first wavelength, wherein the first interference filter transmits mostly light having a wavelength within a range about the first wavelength; and
wherein the second sub-apparatus comprises:

a second light source emitting light of a predetermined second wavelength, wherein the second light source is disposed on a second optical axis and the predetermined second wavelength is different from the predetermined first wavelength;

a second light detector for detecting the light of the predetermined second wavelength, wherein the second light detector is disposed on the second optical axis and generates output signals in response to detecting light of the predetermined second wavelength, and wherein the first lens holding apparatus is disposed between the second light source and the second light detector and is positioned on the second optical axis;

a second lens holding apparatus for holding the lens undergoing examination when the first lens holding apparatus is not holding the lens undergoing examination, wherein the second lens holding apparatus is disposed between the second light source and the second light detector and is positioned on the second optical axis, wherein the second lens holder releasably holds the lens undergoing examination;

an additional first convergence lens for converging rays of the light of the predetermined second wavelength at a second prescribed position, wherein the second prescribed position is on or near the lens undergoing examination when the ~~first lens holder~~second lens holding apparatus is holding the lens undergoing examination;

an additional second convergence lens disposed between the ~~first~~second lens holding apparatus and the second light detector, wherein the additional second convergence lens

serves to converge rays of the light of the second predetermined wavelength into the second light detector; and

a second interference filter disposed along the second optical axis and on a path of the rays of the light of the predetermined second wavelength, wherein the second interference filter transmits mostly light having a wavelength within a range about the predetermined second wavelength, wherein the microprocessor receives signals from the first light detector of the first sub-apparatus and receives signals from the second light detector of the second sub-apparatus, and the microprocessor determines the light transmittance of the lens undergoing examination based upon the signals received from the first light detector and the second light detector.

16. (Presently Amended) An apparatus for measuring light transmittance-according to claim 13, the apparatus further comprising a first sub-apparatus, a second sub-apparatus, and a microprocessor electronically connected to receive signals from the first sub-apparatus and the second sub-apparatus,

wherein the first sub-apparatus comprises:

a first light source emitting light of a predetermined first wavelength, wherein the first light source is disposed on a first optical axis;

a first light detector for detecting the light of the predetermined first wavelength, wherein the first light detector is disposed on the first optical axis and generates output signals in response to detecting light of the predetermined first wavelength;

a first lens holding apparatus disposed to hold a lens undergoing examination, wherein the first lens holding apparatus is disposed between the first light source and the first light detector and is positioned on the first optical axis, wherein the first lens holding apparatus releasably holds the lens undergoing examination;

a first convergence lens for converging rays of the light of the predetermined first wavelength at a first prescribed position, wherein the first prescribed position is on or near the lens undergoing examination when the first lens holding apparatus is holding the lens undergoing examination;

a second convergence lens disposed between the first lens holding apparatus and the first light detector, wherein the second convergence lens serves to converge rays of the light of the first predetermined wavelength into the first light detector; and

a first interference filter disposed along the first optical axis and on a path of the rays of the light of the predetermined first wavelength, wherein the first interference filter transmits mostly light having a wavelength within a range about the first wavelength; and
wherein the second sub-apparatus comprises:

a second light source emitting light of a predetermined second wavelength, wherein the second light source is disposed on a second optical axis and the predetermined second wavelength is different from the predetermined first wavelength;

a second light detector for detecting the light of the predetermined second wavelength, wherein the second light detector is disposed on the second optical axis and generates output signals in response to detecting light of the predetermined second wavelength, and wherein the first lens holding apparatus is disposed between the second light source and the second light detector and is positioned on the second optical axis;

a second lens holding apparatus for holding the lens undergoing examination when the first lens holding apparatus is not holding the lens undergoing examination, wherein the second lens holding apparatus is disposed between the second light source and the second light detector and is positioned on the second optical axis, wherein the second lens holder releasably holds the lens undergoing examination;

an additional first convergence lens for converging rays of the light of the predetermined second wavelength at a second prescribed position, wherein the second prescribed position is on or near the lens undergoing examination when the ~~first lens holder~~second lens holding apparatus is holding the lens undergoing examination;

an additional second convergence lens disposed between the ~~first~~second lens holding apparatus and the second light detector, wherein the additional second convergence lens serves to converge rays of the light of the second predetermined wavelength into the second light detector; and

a second interference filter disposed along the second optical axis and on a path of the rays of the light of the predetermined second wavelength, wherein the second interference filter transmits mostly light having a wavelength within a range about the predetermined second wavelength, wherein the microprocessor receives signals from the first light detector of the first sub-apparatus and receives signals from the second light detector of the second sub-apparatus, and the microprocessor determines the light transmittance of the lens undergoing examination based upon the signals received from the first light detector and the second light detector.